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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/809,304	03/24/2004	Wenman Li	yeh-pt008	6519

7590 03/12/2007  
Kao H. Lu  
686 Lawson Ave.  
Havertown, PA 19083

EXAMINER
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ALEJANDRO, RAYMOND

ART UNIT	PAPER NUMBER
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1745

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/12/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

# Office Action Summary

Application No.

10/809,304

Applicant(s)

LI, WENMAN

Examiner

Raymond Alejandro

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 24 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1 and 2 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 8. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.
2. The drawings are objected to because the description of Figure 1 does not mention reference numeral 8 and the description of Figure 2 does not mention reference numerals 5 and 8. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the

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drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," "The present invention" etc.

### ***Claim Objections***

4. Claim 1 is objected to because of the following informalities: all parenthesis [i.e. "(...)"] should be removed and respective terminology therein should be positively claimed so as to have a better understanding of the claims. Appropriate correction is required.
5. Claim 1 is objected to because of the following informalities: capital letters in the body of a claim are inappropriate, and they should be replaced with lower case letters (e.g. "Stacking" should be replaced with "stacking", etc). Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-2 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. Claim 1 recites the limitation "the leads" in line 1. There is insufficient antecedent basis for this limitation in the claim.

9. Claim 1 recites the limitations "*the multi-plate positive current collector*" and "*the multi-plate negative current collector*" in line 4; then in line 5, the claim recites "*both collectors*"; and later on, "*the positive current collector*" (line 6) and "*the negative current collector*" (lines 6-7) are recited. There is insufficient antecedent basis for this limitation in the claim because applicant employs three different terminology for the same feature in the present claim and it may be immediately unclear if "*the collectors*" refer to "*the positive current collector*" and "*the negative current collector*" and/or "*the multi-plate positive current collector*" and "*the multi-plate negative current collector*", and/or vice-versa. Claim terminology should be consistent through the entire claim including preamble and body thereof.

10. Claim 1 recites the limitations "*the leads and rivet*" in line 6 and lines 7 (2 occurrences). Insufficient antecedent basis for this limitation in the claim rises as a consequence of not specifying that two different "lead" and "rivets", or "a first lead"/"second lead" and "a first rivet"/"second rivet" are ultimately intended by the applicant. This creates confusion because, as

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instantly claimed, it appears that the same “lead” and “rivet” are used for fastening both the negative and positive current collector.

11. Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term “alteration” in claim 1 is apparently used by the claim to mean “alternately”, while the accepted meaning is “adjustment” or “modification” or “change”. The term is indefinite because the specification does not clearly redefine the term.

12. Claim 2 recites the limitation "the battery" in line 2. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 102***

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

14. Claims 1-2 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Tura et al 6242128.

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The present application is directed to a method of fastening the leads to positive and negative electrodes wherein the disclosed inventive concept comprises the step of fastening them with a common current/lead and rivet.

As to claim 1:

Tura et al disclose a method of tab bussing for a multicell battery (COL 1, lines 65-67 & lines 5-10/ CLAIM 1) wherein each cell includes an anode, a cathode and an electrolyte separating the anode and the cathode (*the stacked anode/membrane/cathode*), and at least one tab with at least one hole therein (*the punched current collector*); the battery includes at least one holding device such as rivets 30 passing through a hole in a tab of each cell and is secured to the tabs (Col 2, lines 15-20/ COL 3, lines 15-25/FIGURES 1-2) which is then connected to terminal 42 (*the lead*).

The method comprises a step of forming at least one hole through a tab of each individual cell, and inserting into a hole in a tab of each cell a holding device and securing the holding device to the tabs (COL 2, lines 1-5/ FIGURES 1-2). Tura et al discloses the method of tab bussing includes forming holding holes in the anode/cathode tabs and in terminal 42 by drilling or stamping (COL 4, lines 9-20) and the step of aligning these features (COL 4, lines 15-32); and the step of inserting into the hole formed therethrough first/second holding devices (Claim 1).

1. A method of tab bussing for a multicell battery, said multicell battery including a plurality of individual cells, each cell including at least one anode tab and one cathode tab, said method comprising the steps of:

forming at least one hole through each of the anode and cathode tabs of each of said individual cells;

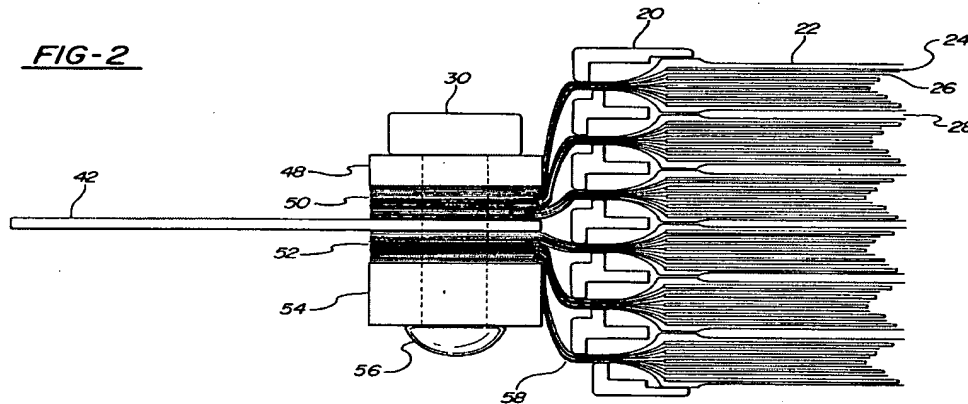
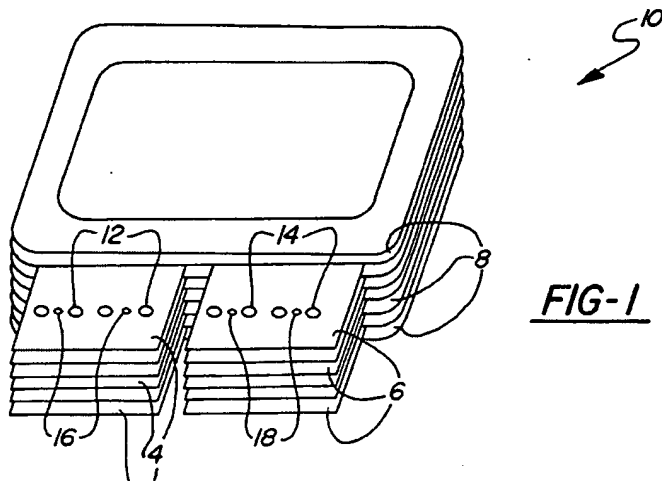
putting the cells alongside one another to form a battery;

aligning the anode tabs of the plurality of cells by reference to the holes in the anode tabs;

aligning the cathode tabs of the plurality of cells by reference to the holes in the cathode tabs;

inserting into a hole formed through the anode tabs of each said cells a first holding device and securing said first device to said anode tabs; and

inserting into a hole formed through the cathode tabs of each said cells a second holding device and securing said second device to said cathode tabs.



As to claim 2:

**Figures 1-2** above illustrate the use of multiple holding devices associated with a single tab (CLAIM 1). Thus, the requirement of varying the number of rivets and points of riveting is met because: 1) such a limitation is not recited in a positive manner (i.e. "may vary") so that a clear number of rivets and points of riveting is set forth therein. The language "may vary" has been interpreted as an optional step; or 2) the prior art uses at least more than one (1) bolt (rivet) for connecting current collectors. Thus, the prior art at once envisages using a number of rivets and points of rivet other than just one.

Thus, Tura et al anticipate the present claims.

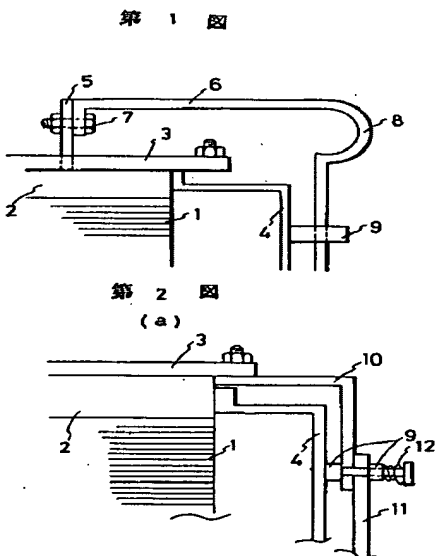
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15. Claims 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by the Japanese publication JP 61-193376 (heretofore the JP'376).

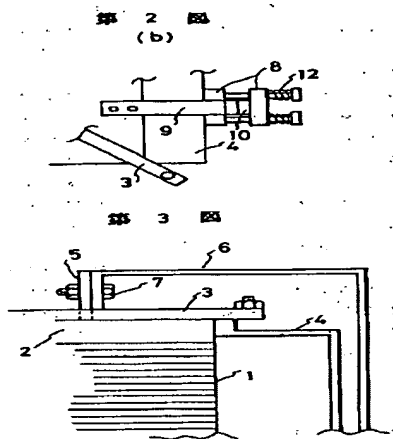
The present application is directed to a method of fastening the leads to positive and negative electrodes wherein the disclosed inventive concept comprises the step of fastening them with a common current/lead and rivet.

As to claim 1:

**Figures 1-2** below of JP'376 clearly illustrate a laminated cell comprising a matrix for holding electrolyte and gas diffusion electrodes (ABSTRACT/CONSTITUTION) and current collector plates 2 (*first and second current collector plates connecting electrode of multiple cells*) mounted on the top and bottom faces of the cell and clamped with a metal clamping fitting 3, and a bus bar 6 (*the leads*) is fixedly mounted on a current lead terminal 5 projecting from the current collector plate 2 by making use of a clamping bolt 7 (*the rivets*) (Abstract/Constitution).



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**Examiner's note:** the JP '376 explicitly discloses all the features mentioned above. As such, the JP '376 must implicitly disclose a method of assembling all of the above features comprising the steps of alternately stacking electrodes and an electrolyte matrix to form a cell; and aligning punched lead terminals 5 which are then fastened to a bus bar 6 (the lead) by using a bolt 7 (the rivet).

As to claim 2:

**Figures 1-2** above illustrate the use of multiple bolts associated with a single current collector. Thus, the requirement of varying the number of rivets and points of riveting is met because: 1) such a limitation is not recited in a positive manner (i.e. "may vary") so that a clear number of rivets and points of riveting is set forth therein. The language "may vary" has been interpreted as an optional step; or 2) the prior art uses at least more than one (1) bolt (rivet) for connecting current collectors. Thus, the prior art at once envisages using a number of rivets and points of rivet other than just one.

Thus, in its broadest reasonable interpretation, the JP '376 anticipates the present claims.

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***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond Alejandro whose telephone number is (571) 272-1282. The examiner can normally be reached on Monday-Thursday (8:00 am - 6:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Raymond Alejandro  
Primary Examiner  
Art Unit 1745



RAYMOND ALEJANDRO  
PRIMARY EXAMINER